

## **Replacement Page 1, 1st Paragraph**

### **BACKGROUND OF THE INVENTION**

The invention relates to a metallic object comprising a stable coating of nucleic acid compounds, i.e., nucleic acids and/or nucleic acid derivatives, and a method for manufacturing aforementioned coating. By coupling active ingredients to the nucleic acids and/or nucleic acid derivatives, the coating can be matched to different applications and the biocompatibility of surfaces modified accordingly can be increased.

## **Replacement Page 3, 2nd Full Paragraph**

### **SUMMARY OF THE INVENTION**

The object of the invention is to provide a metallic object with a stable coating of nucleic acid compounds, i.e. nucleic acids and/or nucleic acid derivatives, in which the nucleic acids are optimally accessible for further reactions, for example, hybridizations.

## **New Section to Be Added Between Lines 6 and 7 of Page 13**

### **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 shows schematically a nucleic acid molecule fixed metastably on the substrate surface comprised of a thin metal-metal oxide layer.

Fig. 2 shows schematically a newly grown metal oxide layer that is produced by anodic polarization and has embedded therein the terminal area of the nucleic acid molecule of Fig. 1; also shown is the complementary fluorescein-marked nucleic acid compound bonded to the immobilized nucleic acid compound.

### **DESCRIPTION OF PREFERRED EMBODIMENTS**

### **Replacement Paragraph Bridging Pages 15 and 16**

A metallic sample of TiAl6V4 is incubated as described in Example 1 ~~Example 2~~ with a 5'-phosphorylated T3E-5P DNA (see 1a) and subsequently rinsed with 3 ml sterile acetate buffer (0.2 mol/liter; pH = 4.0) and twice with 3 ml sterile water without performing anodic polarization (see 1 b). Subsequently, the sample is incubated, as described in Example 1, with fluorescent S3E-FI DNA that is complementary to the 3'-terminal of T3E-5P DNA and is then washed.

### **Replacement 2nd to Last Paragraph of Page 17**

Under the fluorescence microscope no fluorescence can be detected in a sample treated in this way. In order to determine whether the lack of fluorescence is caused by incorporation of the fluorescein molecule into the surface at too deep a level, the composition of the oxide layer formed on the sample surface was analyzed by photoelectron spectroscopy (XPS). ~~Up to a depth of 5 nm no phosphorus analyzed.~~ Up to a depth of 5 nm no phosphorus was detected. The negative result of the phosphorus detection shows that no nucleic acid was bonded.

## Replacement Last Paragraph Page 18

The comparative Examples 6 to 9 were carried out in accordance with the Examples 1 through 5 described in detail with a sample of TiAl6V4, the differences being listed in the table. The conditions under which the immobilization, i.e., incubation with DNA, was carried out are shown in column 2 and those of the optional subsequent anodic polarization are listed in column 3. Columns 4 and 5 indicate whether an anodic polarization and a hybridization with a complementary DNA were carried out. In columns 6 and 7 the results of fluorescence microscopy or photoelectron spectroscopy (XPS) are listed.